Marshall Star, November 7, 2012 Edition

MARSHALL STAR

In This Week's Star ⊟

Getting Closer to the Goal

The Marshall Space Flight Center's 2012 Combined Federal Campaign runs through Dec. 15. So far, Marshall's work force has contributed $250,927 toward the center's $700,000 goal.

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CFC Nonprofit Helped Marshall Engineer's Wife 'Feel Better' During Cancer Fight

By Megan Davidson

In 2009, Kathleen Freestone told her husband she had a nagging backache after coming home from a business trip. Thinking it was just a simple pain from picking up their two children, she didn't worry too much about it -- until she also discovered a lump under her armpit. Just two weeks later, Freestone was undergoing aggressive treatment for stage four, triple-negative breast cancer.

Image left: The Freestone family in April 2010, eight months before Kathleen Freestone passed away from breast cancer. (Photo courtesy)

"The cancer was everywhere -- liver, bones -- everywhere," said Todd Freestone, who met his wife while both worked as engineers at the Marshall Space Flight Center. "It was solidly entrenched in her spine, among other places, which is why her back started hurting so badly. It was so painful at one point that I had to carry her in and out of places.

"She had an annual exam two months before her diagnosis, with no abnormal test results," he added. "Having just turned 40 at the time, she was too young to have routine mammograms and didn't have any known risk factors. We were shaken but determined to fight."

Kathleen Freestone had a port put into her chest immediately following her diagnosis, and began chemotherapy and radiation treatments. "Her doctor said without chemo, she probably had only weeks left to live -- weeks. I had to pinch myself to make sure I wasn't dreaming," said Todd Freestone, who as a child, lost both his parents to cancer.

Shortly after Kathleen Freestone's cancer diagnosis, her sister told her about the American Cancer Society's "Look Good, Feel Better" program. It teaches beauty techniques to cancer patients to help them manage appearance-related side effects of cancer treatment.

"We were told by Kathleen's doctors that her first round of chemo would cause her to lose all of her hair, and could possibly change the tone of her skin," recalls Todd Freestone. "We were so thankful to find out about the 'Look Good, Feel Better' program because it helped her feel less stressed about her appearance, especially during a time when she was already stressed enough about her health. She learned how to hide some of those cancer scars and put to practice some good tips on wearing wigs. It brightened her spirits during a difficult time. She needed that."

Kathleen Freestone began a third round of chemotherapy in early 2010, but after four treatments, she suffered a subarachnoid hemorrhage -- bleeding in the area between the brain and the thin tissues that cover the brain -- and underwent emergency surgery. She improved and was able to go home after a three-week stay in the Huntsville Hospital Neurological Intensive Care Unit. "I was so proud of my wife for making such a remarkable recovery from that brain surgery," said Todd Freestone. "God was good to us."

Image right: To honor their mother's memory, Matthew Freestone, 10, and Julia Freestone, 8, sent balloons and letters up to the sky on Mother's Day in 2011. (Photo courtesy)

In July 2010, Kathleen Freestone resumed her chemotherapy treatments. The Freestones did try to have some fun as a family during that time, taking their children, Matthew, now 10, and Julia, 8, to Disney World in Orlando. Kathleen Freestone was able to get around the park with the help of a motorized scooter.

Despite another round of radiation treatments in late November, Kathleen Freestone suffered acute liver failure due to her cancer. Surrounded by her family, she passed away Dec. 29, 2010.

"Since Kathleen's death, there have been harder days, and there have been better days," said Todd Freestone. "We were happily married for 16 years. As time goes on, the better days are starting to outnumber the tougher days. Although the kids and I will never stop missing Kathleen, I know we'll be OK. We've received a tremendous amount of support from so many people, and can't put into words how grateful we are for that support."

"Kathleen is at rest now -- no more pain, no more worries. She's in a better place."

The American Cancer Society is a nonprofit group dedicated to cancer research and education. Programs like "Look Good, Feel Better" are supported by Combined Federal Campaign donations. Marshall team members may donate to the American Cancer Society, CFC code number 10570, or other charitable organizations on the CFC ExplorNet page.

Davidson, an Analytical Services Inc. employee, supports the Office of Strategic Analysis & Communications.

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Past and Future: Space Launch System Goes On the Road with Shuttle

The space shuttles Endeavour and Atlantis were moved to their new permanent homes last week -- Endeavour to the California Science Center in Los Angeles and Atlantis to the Kennedy Space Center Visitor's Center. When the vehicles went on display for the public during celebratory events on both coasts, representatives from NASA's Space Launch System Program -- managed at the Marshall Space Flight Center -- were on hand to provide information to the public about America's new rocket and answer their questions.

A 6-foot-tall model of NASA's Space Launch System – which is managed at the Marshall Space Flight Center -- stands near the space shuttle Atlantis as the orbiter makes its final voyage on Nov. 2, rolling from the Kennedy Space Center's orbiter processing facility to its permanent home at Kennedy's Visitor's Center. Thousands of people from across the country and as far away as New Zealand, Europe and South America were on hand for the "Atlantis Rollover" celebration Nov. 2-4, and were given the opportunity to learn about the SLS. (NASA/KSC/Marc Jaime)

Tom Erdman, deputy manager of the Marshall Center Resident Office at the Kennedy Space Center, explains the future of human exploration to guests of the NASA Social -- an opportunity for social media followers of NASA to get behind-the-scenes access to the agency. The "Atlantis Rollover" event was hosted by Kennedy. (NASA/MSFC/Bill Hubscher)

A tiny visitor to the California Science Center in Los Angeles dreams big during the space shuttle Endeavour celebration Oct. 30-Nov. 4 as Twila Schneider, right, a communications strategist with Analytical Services Inc., supporting the SLS Program at the Marshall Center, shows him a scale model of the proposed SLS. The child was one of approximately 46,000 people who visited the science center during the event. (NASA/MSFC/Kirk Pierce)

Coinciding with the opening of the new Endeavour exhibit in California, SLS Associate Program Manager Jerry Cook spoke to the public Nov. 2 at a space exploration panel at the Griffith Observatory in Los Angeles. (NASA/MSFC/Kimberly Robinson)

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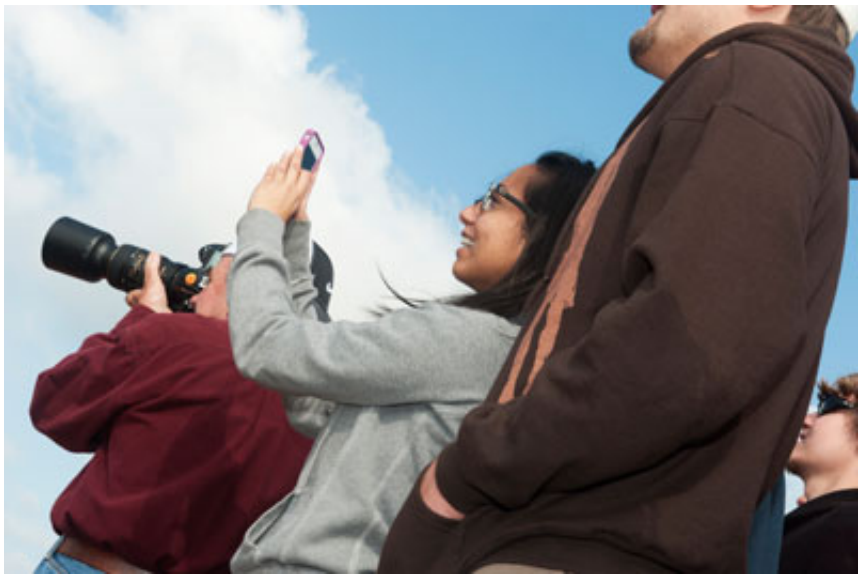
Marshall Photographer Emmett Given Captures Marshall's Memories for 25 Years

By Jessica Eagan



As soon as he stepped foot in Building 4353, Marshall Space Flight Center photographer Emmett Given knew he found his second home. Twenty-five years later, he enters through that same door.

Image left: Emmett Given, partly obscured at far left, busy at work during the April 22 NASA Student Launch Projects event in Toney. (NASA/MSFC/Lisa Monaco)

"I loved the way it smelled," reminisced Given of that day back in October 1987 in the center's photography laboratory.

Camera by his side, Given -- a Dynetics Technical Services Inc. employee supporting Marshall's Application, CRM & Multimedia Office -- found himself surrounded by photo enlargers, processing chemicals, safelights, trays, tongs -- and other equipment necessary for a darkroom -- shortly after a Marshall contractor discovered Given's black-and-white landscape prints hanging in an office on the Army side of Redstone Arsenal. That contractor happened to support the center's photo services.

Given was contacted and asked if he could help for a month to print old black-and-white negatives that were needed for a particular job.

"That month has lasted for almost three decades," smiled Given. "I instantly felt like I belonged here."

Back then, the lab was filled with more than 30 people with one goal in mind: To capture Marshall's work that can be viewed for generations to come.

Image right: Emmett Given captures one of his most memorable Marshall photos during the STS-117 launch in June 2007. The Hutt family of Madison shared a special moment with thousands of other viewers as they witnessed -- and felt -- space shuttle Atlantis's thunderous liftoff at Kennedy Space Center. "I'll never forget their excitement. It was just infectious," said Given. (NASA/MSFC/Given)

"When I first started here, we would produce thousands of prints and viewgraphs a month," said Given. "This was an extremely busy place. And it was right up my alley. I loved working in the dark room, developing negatives and producing prints."

So what was Given's first job at Marshall as a photographer? While it didn't include a launch with brilliant fire, he guarantees that he was safely harnessed in.

"I had to crawl around the girders in the test facility in Building 4619, taking pictures of pigeon droppings," laughed Given. "Yes, most people find this amusing. Marshall had a problem with pigeons roosting in the high beams, so we needed to document it in order to get money to take care of our little problem. The other photographers here at the time were very entertained. They, of course, thought this was the perfect job for the new guy."

But launch photos were captured with Given's camera for years to come after the pigeon incident. In fact, one of his favorite photos was shot at Kennedy Space Center in 2007.

"I'll never forget the excitement of a family attending a launch as guests of the Protocol Office," recalled Given. "Their excitement was just infectious. They asked tons of questions and they were so thrilled. Right when the space shuttle went up, I shot photos of their reactions. Reactions that are set in my memory. They were literally jumping up and down. They were cheering through their tears."

Image left: This photo was published in the August 2002 Marshall Star with this caption: While Marshall photographer Emmett Given, center, is often privy to the secret list of Silver Snoopy recipient names as he accompanies astronauts on their surprise rounds, last week one name was cleverly missing: his own! Told that a colleague was to be honored, Given stood poised with eye to his viewfinder to capture the special moment. "I think we've really achieved the goal of surprise this time," said STS-111 Commander Kenneth Cockrell, right, who presented the Snoopy, "because the award winner isn't one of you sitting down … It's Emmett." Truly surprised, Given thanked his co-workers for making his job one he "would do all over again, given the chance." With Given is his friend,

Linda Riley. (NASA/MSFC/Doug Stoffer)

One of Given's main goals as a photographer is to make sure that Marshall team members feel good about themselves when they see their picture. "I love dealing with the details and portraying everyone in a positive light," said Given. "One challenge I run into is trying to capture an important photo quickly. I like to take my time and make sure that it's done right the first time."

Through the years and thousands of photographs later, Given believes that he has one of the best jobs around. Every day is different. One moment, he could be in a test area with a hard hat and jeans, and the next moment, he could be called to the center director's office to capture an executive event. "This just keeps my job interesting and never boring," said Given.

With the spontaneity that comes with his job, Given wakes up wondering who he's going to see or meet today -- his favorite part.

"It's the people here who make my career fulfilling," said Given. "Because I've photographed about three-fourths of the workforce, I have created a lot of wonderful friendships and I'm so grateful. That's what I love the most."

Before Marshall

Some might say it was fate that eventually led what could be the most easily recognizable face to employees at Marshall.

Image right: Emmett Given, left, with a very familiar face -- country singer legend Dolly Parton -- in 1974. Given was a friend of Parton's sister, Cassie, and when she created the "Dolly Parton Fan Club," he was one of the first to join. (Photo courtesy)

But Given was only 40 when he picked up a camera for the first time. His original goal was to be an architect, but he began a career in the beeper business.

"I came across a stunning black-and-white landscape photo in the newspaper," said Given. "It was advertising an exhibit called 'The Wise Silence' by artist Paul Caponigro at the Huntsville Museum of Art. I looked at that photograph and something about it just really spoke to me. A picture has never really had that kind of affect on me before. So I went that night to see that exhibit, and when I left, I knew what I wanted to do. I remember thinking, 'I have got to try this.' Seeing that exhibit was the single, most important event of my life.

"So I built myself a darkroom, and for the next two years, I did nothing but immerse myself in the study of photography," he added. "At the end of two years, a lady from the University of Alabama in Huntsville called me to say that they were in need of a darkroom instructor. She said she'd asked nine people in Huntsville whom they'd recommend, and seven of them gave her my name. I accepted the offer and taught for nine years. That's also the same time when I started here. It worked out well. Although I've always loved art and architecture, I never really found a way to express my love of those things as much as I did with photography. It was just the right thing at the right time. It was almost creepy how perfectly it worked out."

Given doesn't look at photography as his job; he sees it as his passion. When he's off the clock, the camera and equipment aren't packed away. It's not untypical for him to wake up at 2 a.m., and develop a photo he captured the night before, or mix his own chemicals -- right in the largest room of his house. "I converted my master bedroom into my darkroom," said Given.

"It's a matter of priorities! About 10 years ago, when Marshall went digital, I bought the entire contents of the darkroom. People always ask me how I can get up so early. It's simple. I'm excited and I want to get working."

Given has spent many evenings capturing that perfect shot under the skies of New Mexico, where he and his girlfriend of 25 years, Linda Riley, own two cabins. "I love it out there," he said. "They call it the 'land of enchantment.' You'll find out if you visit. It will get a hold of you and won't let go. All of a sudden, you become aware, and there is this whole other dimension called the sky. Some of my favorite photos have come from there."

The next time you see Given taking photos at a Marshall event, smile big. And if you think about it, ask him about his close encounter with a big bear in New Mexico.

Image left: Emmett Given often takes his talent to where he calls "the land of enchantment" -- New Mexico. Here, his good eye captures a rugged landscape in 2004, near American artist Georgia O'Keefe's home at Ghost Ranch in Abiquiu. (Emmett Given)

For more information about Marshall's Photography and Imaging Services, visit here.

Eagan, an Analytical Services Inc. employee and the Marshall Star editor, supports the Office of Strategic Analysis & Communications.

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Local High School Students to Represent Marshall Center at FIRST Robotics Competitions

The Marshall Space Flight Center's Academic Affairs Office recently awarded a Robotics House Team Grant to Team 442 -- Redstone Robotics, whose members are students from Lee High School and New Century High School, both in Huntsville. The local team, and six other teams from Missouri, will represent the Marshall Center at For Inspiration and Recognition of Science and Technology (FIRST) Robotics Competitions. Teams of high school students work closely with professionals from academia, government and industry to construct a robot designed to contend in sports-themed competitions. The Marshall initiative inspires students to pursue careers in science, technology, engineering or mathematics fields. (NASA/MSFC/Emmett Given)

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NASA Seeks Options for SLS Cargo Payload Fairings and Adapters
From NASA news release

NASA is exploring options for larger payload fairings to enhance the cargo carrying capabilities of its Space Launch System heavy-lift rocket, now in development and managed at the Marshall Space Flight Center, to carry cargo, crewed spacecraft and science payloads. In a Request for Information, or RFI, published Nov. 1, the agency is seeking information about payload adapters and fairings already available within commercial industry.

Designed to be flexible for crew or cargo missions, SLS will be safe, affordable and sustainable to continue America's journey of discovery from the unique vantage point of space. Initial SLS configurations will launch NASA's Orion spacecraft, which will sustain astronauts during space travel and provide safe re-entry from deep space. Future configurations could carry science instruments and other exploration payloads to destinations including Lagrange points, the moon, asteroids and ultimately Mars.

"This is a no-cost examination of the aerospace landscape to identify existing components that could augment the rocket's architecture as we move beyond the initial Orion configuration," said Todd May, SLS program manager at the Marshall Center. "SLS can make challenging human and science missions possible in large part because of the unprecedented size of the payload it can lift. We are hopeful industry may offer some innovative and affordable ideas about alternative fairing and adapter options."

The SLS will have an initial lift capability of 77 tons (70 metric tons) and grow in performance through a series of upgrades, providing more lift capacity and volume than existing launch vehicles. Larger payload fairing sizes enabled by SLS could reduce experiment design complexity and the rocket's high performance can decrease travel time and, by extension, cost and risk of science missions.

Glenn Research Center is responsible for payload fairing development for SLS and will manage this RFI. Johnson Space Center manages the Orion program for the agency, and SLS will launch from the Kennedy Space Center.

The full Request for Information can be found at http://go.nasa.gov/PphBhF.

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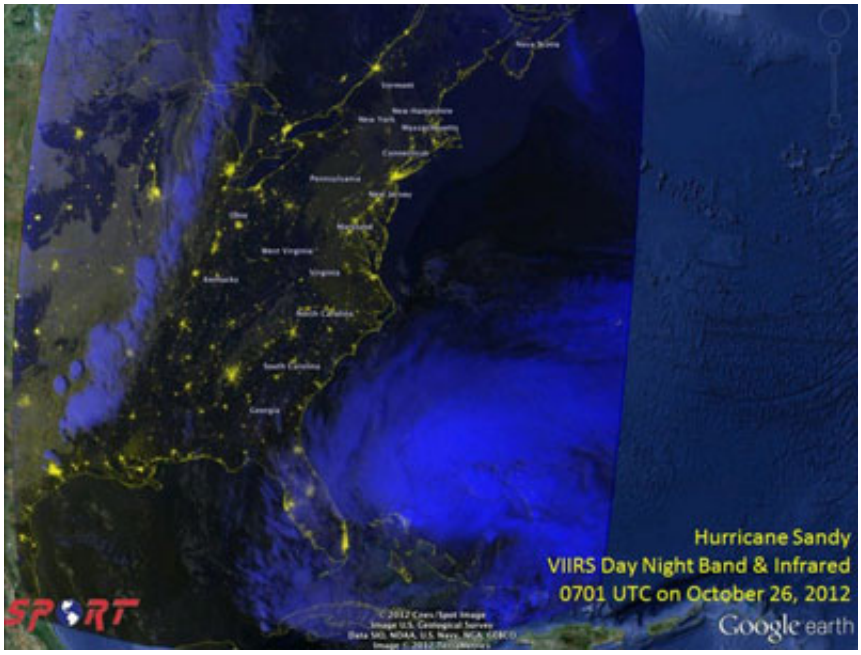
NASA's SPoRT Center Tracks Hurricane Sandy
By Janet Anderson



As Hurricane Sandy wreaked havoc on the East Coast, weather experts at the Short-term Prediction Research and Transition, or SPoRT, Center at the Marshall Space Flight Center were busy developing information to help forecasters better predict the massive storm.

Image left: This Oct. 26 image from NASA's Short-term Prediction Research and Transition Center shows Hurricane Sandy near the East Coast of the United States. For more images, visit here. (NASA)

The SPoRT Center uses Earth Observing System measurements and other satellite data to generate products useful in the analysis of weather events. SPoRT provides these products and data sets to partners within the National Oceanic and Atmospheric Administration, or NOAA, NOAA's National Weather Service and private sector organizations like The Weather Channel.

In 2002, NASA established SPoRT at the Marshall Center to facilitate the use of real-time Earth Observing System measurements for short-term weather forecasting. Near-real-time satellite imagery is useful for monitoring current conditions and events likely to occur in the next few hours. SPoRT provides a variety of satellite imagery and unique products from NASA and NOAA satellites such as Terra, Aqua and the recently launched Suomi National Polar-Orbiting Partnership, or Suomi NPP. These products can be useful for identifying hazards such as severe thunderstorms and tropical cyclones, fog and snow cover, or help to monitor disasters such as floods and wildfires. SPoRT researchers also incorporate satellite observations of the land surface and profiles of atmospheric temperature and moisture within high-resolution weather forecasting models with a goal of improving short-term weather predictions over the next few days.

"SPoRT has been transitioning unique NASA and NOAA research satellite data to numerous National Weather Service forecast offices for the last 10 years to help them improve short-term weather forecasts of hazardous weather conditions like Hurricane Sandy," says Dr. Andrew Molthan, a research meteorologist affiliated with the project. "We work closely with end users to understand their forecast problems and match our data capabilities to those problems."

For the last year, several additional National Weather Service Centers of Excellence --including the National Hurricane Center, the Hydrometeorological Prediction Center and the Ocean Prediction Center -- have used unique multichannel satellite composite products from SPoRT. The composites are derived from NASA's Moderate Resolution Imaging Spectrometer, or MODIS, and the European Spinning Enhanced Visible and Infrared Imager, or SEVIRI, instruments to monitor large-scale weather systems that pose significant weather threats to the United States.

Through partnerships with NOAA's Satellite Proving Grounds, SPoRT provides additional data products from MODIS, SEVIRI and the Visible Infrared Imaging Radiometer Suite, or VIIRS, instruments to monitor daily weather events, including Hurricane and post-Tropical Cyclone Sandy. Forecasters are being provided imagery from multiple satellite sensors, including a recently developed "air mass" satellite product, fusing data from two instruments on the Suomi NPP satellite, to help forecasters monitor the development and decay of this storm.

"There are many MODIS and VIIRS images of Sandy available on the Web, but SPoRT provides the National Weather Service with MODIS and VIIRS data directly within their decision support systems, allowing use with all of their other tools," said Molthan. "SPoRT creates a number of unique value-added products not available anywhere else."

NASA's SPoRT Center continues to provide satellite imagery to the National Weather Service weather forecast office partners and national centers through core SPoRT activities and collaborations with NOAA's Geostationary Operational Environmental Satellite -- R Series and Joint Polar Satellite System Proving Grounds. Final images were created by SPoRT at Marshall using MODIS and VIIRS data provided courtesy of the University of Wisconsin in Madison. The compositing technique resulting in the false color VIIRS day-night band and infrared imagery was provided by the Naval Research Laboratory, or NRL, in Monterey, Calif., as part of an ongoing NRL-SPoRT collaboration.

For more information about SPoRT, visit here.

Follow the SPoRT blog here.

Anderson is a public affairs officer in the Office of Strategic Analysis & Communications.

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Marshall's David Hathaway Captures Parhelia Image at NSSTC Following Hurricane Sandy

On Oct. 30 at the National Space Science and Technology Center, the Marshall Space Flight Center's Dr. David Hathaway captured this image above of a complex network of arcs and halos around the sun. These features are formed by sunlight passing through hexagonal ice crystals -- both plates and rods -- in high and cold cirrus clouds. The ring around the sun and the bright spots on either side, known as a sundog or parhelia, are common. Many of the other arcs and rainbows are rarely seen. Experts have identified a dozen or more arcs in this image. The phenomenon is almost certainly connected to Hurricane Sandy. The storm swept far north of Alabama, but Sandy's outer edges passed over the area, likely leaving a thin haze of ice crystals in cirrus clouds. (NASA/MSFC/David Hathaway)

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Energy Huntsville Group Tours Building 4600 -- Marshall's First LEED Building

A group from the organization Energy Huntsville took a windshield tour of the Marshall Space Flight Center on Oct. 18 to learn about what the center has done -- and is going to do -- to "go green." Energy Huntsville, an initiative led by Huntsville Mayor Tommy Battle, seeks to increase energy conservation technologies in Huntsville and to stimulate business growth in energy preservation. Cedreck Davis, in a red shirt, who is the energy and water program manager in the Facilities Engineering Office of the Office of Center Operations, points out Marshall landmarks from the roof of Building 4600 -- Marshall's first building registered with the U.S. Green Building Council for Leadership in Energy and Environmental Design, or LEED, and NASA's first LEED silver-certified building. At the intersection of Martin and Rideout roads, the building was designed and built according to efficient energy and water principles. Davis led a tour of the building and presented the group with an overview on Marshall's accomplishments in the Energy Conservation Program, including energy consumption reductions and the implementation of a sustainable building program. For more information on Energy Huntsville -- formed by volunteers from large and small businesses, and other organizations -- visit here. To read about Marshall's plans to construct more energy-efficient buildings onsite, visit here. (NASA/MSFC/Fred Deaton)

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NASA Exchange To Hold Annual Pecan Sale Beginning Nov. 16

By Bill Mayo

It's that time of year once again for the NASA Exchange Pecan Sale. For more than 25 years, the Pecan Sale has been one of the most anticipated sales the Exchange has each year. It has been so popular that other NASA centers have started their own sales as their employees were ordering pecans from the Marshall Exchange.

In 1986, a Marshall employee approached the Exchange asking if fresh South Alabama pecans could be sold prior to the holiday season for baking needs. The sale was a big hit! Over the years, more nuts, such as cashews, almonds and walnuts have been added to the event. These nuts are delivered fresh from California as these types of nuts are not grown in Alabama.

The nuts are scheduled to be on sale Nov. 16 at the Space Shop on the first floor of Building 4203. Shop hours are Monday-Friday, 7:45 a.m.- 4 p.m. The sale will be on a first come/first serve basis, and will continue until all nuts are sold. The Exchange has ordered a significant amount, and expects to have quantities available until Christmas.

If you have any questions, call the Space Shop at 256-544-2185.

2012 pecan and nut prices per one-pound bag are:

Pecan Halves	$9.00
Raw Peanuts	$2.25
Chocolate Covered Pecans	$10.00
White Chocolate Pecans	$10.00
Roasted and Salted Pecans	$10.00
Praline Pecans	$10.00

Roasted and Salted Almonds	$7.50
Almonds:	
Natural (12 oz. bag)	$4.50
Blanched/Slivered (10 oz. bag)	$4.50
Roasted and Salted Pistachios	$8.00
Cashews	$8.50
English Walnuts	$7.50

Mayo is the NASA Exchange manager.

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Obituaries

James A. King Sr., 88, of Huntsville died Oct. 8. He retired from the Marshall Center in 1995 as an engineer. He is survived by his wife, Jeanne King.

William Cecil Cunningham, 91, of Huntsville died Oct. 20. He retired from the Marshall Center in 1974 as an aerospace engineering technician.

Jim Kevin Russell, 57, of Madison died Oct. 22. He retired from the Marshall Center in 2008 as an engineer.

William Bryan Heard, 90, of Huntsville died Oct. 23. He retired from the Marshall Center in 1979 as an aerospace engineer. He is survived by his wife, Janette Heard.

Find this article at:

http://www.nasa.gov/centers/marshall/about/star/index.html